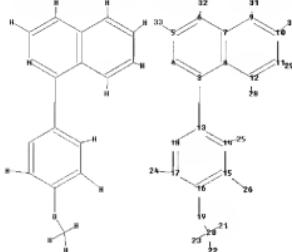


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chain nodes :
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 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
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 ring bonds :
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 exact/now bonds :
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 15-16 16-19 19-20
 20-21 20-22 20-23

G1xE,A1,Gx,Ix

G2:Ox,Ny,Cy

Match: 1
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5 ANSWERS

L2 5 SEA SSB FOR L3

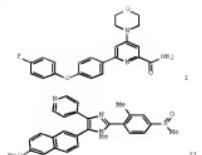
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>>> 4 links and 11 files 1-
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L3 ANSWER 1 OF 12 CAPTION: CUPROTH 2010 ACS on EP
 ACCESSION NUMBER: 20091158151 CAPTION: Palladium-catalyzed cross-coupling of aryl halides
 DOCUMENT NUMBER: 1511528391
 TITLE: Palladium-catalyzed cross-coupling of aryl halides
 using organometallic nucleophiles
 AUTHOR(S): Lee, Hong; Wei, Long; Yu, Leil; So, Cheol; Minig, Lau; Chik
 Yu; Kim, Hyun; Kim, Hyun; Kim, Hyun; Kim, Hyun; Kim, Hyun
 Open Laboratory of Chirotechnology of the Institute of
 Molecular, Technology for Drug Discovery and
 Synthesis, Chinese Academy of Chinese Medical Sciences
 and Peking Union Medical College Polytechnic University, Hung
 Ren, Kewei; Hong, Hong
 SOURCE: Angewandte Chemie, International Edition
 48(17):3200-3203 (2009); DOI: 10.1002/anie.200804693
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Article
 LANGUAGE: English
 OTHER SOURCE(S): CACTUS 1511528391
 AB Palladium-catalyzed cross-coupling of aryl halides with organometallic
 nucleophiles led to the formation of biaryl derive in good yields
 IT pTc-14-7
 (preparation of biaryl derive via palladium-catalyzed cross-coupling of
 aryl halides with aryltin nucleophiles)
 EN 36710-74-4 CASRN
 CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)

G2:Ox,Ny,Cy



AB Palladium-catalyzed direct arylation reactions were described with a broad range of arine and arole N-oxides. In addition to aspects of functional group compatibility, issues of regioselectivity were explored when nonaromatic N-oxides were used. The results indicated that the electronic properties of the arine substituents played important roles in determining the regioisomeric distribution. When arole N-oxides were employed, preferential reaction was observed at the ortho position of the arole ring, and the para position was unreacted. Subsequent reactions were observed to occur at C5 followed by arylation at C4. The potential utility of this method was illustrated by its use in the synthesis of a potent inhibitor of the CCR2 receptor and a CCR4 receptor inhibitor II.

IT 1-20 L3 12 L3
 RL: RCT (Reactant); SWP (Synthetic preparation); PEP (Preparation); RACT
 (Reactant or reagent);
 (Reaction) palladium-catalyzed direct arylation of arine and arole
 N-oxides and applications in synthesis)

EN 36710-74-4 CASRN
 CN Isoquinoline, 1-(4-methoxyphenyl)-, 2-oxide (CA INDEX NAME)

IT 1-20 L3 12 L3
 RL: RCT (Reactant); SWP (Synthetic preparation); PEP (Preparation);
 (Reaction) palladium-catalyzed direct arylation of arine and arole
 N-oxides and applications in synthesis)

EN 36710-74-4 CASRN

Preparation of cyclometalated iridium complex as organic
electroluminescence
device(s)

INN 951164-54-9 CARLUS
CN Iridium, bis[2-(1-quinolinyl)-1b-5-methoxyphenyl-1c-5-methoxyphenyl-1a]- (CA INDEX NAME)



17. ANHMER 7 OF 14 CARLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2006141906 CARLUS Full-text

DOCUMENT NUMBER: 1451123952

TITLE: Iridium(III) indenole derivatives, organic electroluminescent
devices therewith, and displays therefrom

INVENTOR(S): Tsuchiya, Toshiyuki; Yamamoto, Toshiyuki; Kanemoto, Atsushi; Hashimoto, Masahisa; Kurokawa, Minko

PATENT ASSIGNEE(S): Canon Inc., Japan
Jpn. Kokai Tokkyo Koho, 17pp.

SOURCE: Cited by JPO/JAPO

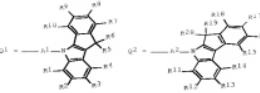
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY SIZE: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006219393	A	20060924	JP 2005-32002	20050209
OTHER SOURCE(S):		US 2005-32002		20050209

01

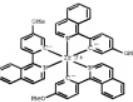


AB The compounds having (substituted) indenole-containing partial structures, preferably represented by q1 and q2 (A3 = single bond, arylene, bivalent heteroatom, or nitrile), are described. The compounds are useful as emitting layer materials in organic EL devices. The compounds having (substituted) indenole-containing partial structures, having high luminescence efficiency and durability, are also claimed.

II EL (Emitting layer), CARLUS (Device component used), HESB (Type)

(guest, emitting layers) indenole derivative showing stable glassy state and suitable for host materials of organic EL displays

INN 951164-54-9 CARLUS
CN Iridium, tri(2-(1-quinolinyl)-1b-5-methoxyphenyl-1c)- (CA INDEX NAME)



17. ANHMER 8 OF 14 CARLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2006162123 CARLUS Full-text

DOCUMENT NUMBER: 1451123952

TITLE: Metal complexes with nucleophilic carbenes ligands and
devices and processes using them

INVENTOR(S): Pretot, Roger; Van Der Schaeff, Paul; Adamsch, Schmidt, Jean-Pierre; Baudin, Jean; Bouet, Philippe; Bouy, Philippe; Lomelot, Bertrand

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: PCT Int'l Appl., 147 pp.

CODEN: FIXED3

optionally contain heteroatoms; ring C = an optionally substituted aryl group which can optionally contain heteroatoms; n1 = 1 + x, n2 = 0, 1, or 2; n3 = 0 or 1; M = a metal with an atomic weight > 49; L = a monodentate or bidentate ligand which can contain heteroatoms, except for the ligand L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, L34, L35, L36, L37, L38, L39, L40, L41, L42, L43, L44, L45, L46, L47, L48, L49, L50, L51, L52, L53, L54, L55, L56, L57, L58, L59, L60, L61, L62, L63, L64, L65, L66, L67, L68, L69, L70, L71, L72, L73, L74, L75, L76, L77, L78, L79, L80, L81, L82, L83, L84, L85, L86, L87, L88, L89, L90, L91, L92, L93, L94, L95, L96, L97, L98, L99, L100, L101, L102, L103, L104, L105, L106, L107, L108, L109, L110, L111, L112, L113, L114, L115, L116, L117, L118, L119, L120, L121, L122, L123, L124, L125, L126, L127, L128, L129, L130, L131, L132, L133, L134, L135, L136, 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L542947, L542948, L5429

1) NUMBER 10 OF 14 CAFUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 20061329209 CAFUS Full-text
DOCUMENT NUMBER: 1441321249
TITLE: Organic electroluminescent devices employing phosphorescent organic materials doped with optimized differences in electron affinity and ionization potential
INVENTOR(S): Iwasa, Kenji; Okada, Shinjiro; Igawa, Satoshi; Hashimoto, Masaharu; Iwaseki, Hirobumi; Kurokawa, Mihoko; Tanaka, Toshiaki
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: U.S. Pat. Appl. Publ., 14 pp
COUNTRY: JPN/US
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

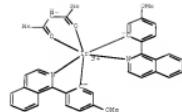
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060448225	A1	200602330	US 2005-335111	20050927
US 7446017	A2	20081216		
JP 2006126362	A	20060519	JP 2005-261940	20050909
JP 2006126362	B2	20090702	JP 2005-283239	20050929

PRIORITY APPLN. INFO.:

ASSIGNMENT HISTORY FOR THIS PATENT AVAILABLE IN THE RE FORMAT
AB The present invention provided a phosphorescent luminescent device which has high-efficiency and a long lifetime. Organic electroluminescent devices are generally composed of an anode, a cathode, and an organic layer sandwiched between the pair of electrodes, the organic layer having at least a light-emitting layer, where the light-emitting layer comprises a host material and dopants. The present invention provides a light-emitting device, where the triplet lowest excitation level of the first dopant is higher than a triplet lowest excitation level of the host material, and a triplet lowest excitation level of the second dopant is lower than the triplet lowest excitation level of the host material.
12 JP 2006126362
PL: DEV (Device component used); MOA (Modifier or additive used); PFP (Properties); USES (Uses)
RE: Organic electroluminescent devices employing phosphorescent dopants and display apparatus
KR 855532-89-7 CAFUS
CN Iridium, tri[2-(1-isomquinolinyl- π)-5-methoxyphenyl- π]-, (OC-6-21) (CA INDEX NAME)



1) NUMBER 11 OF 14 CAFUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 200613403 CAFUS Full-text
DOCUMENT NUMBER: 1441321259
TITLE: Color tuning of iridium complexes - Part I: Substituted phenylisoquinoline-based iridium complexes as phosphorescent emitters
AUTHOR(S): Fang, Kai-Hung; Wu, Li-Leng; Huang, Yu-Ting; Yang, Chia-Chen; Chen, Chia-Chen
CORPORATE SOURCE: Department of Chemistry, National Cheng Kung University, Taiwan, 70101, Taiwan
SOURCE: Inorg. Chem., 45(2), 359-365
CROSSREF: IJCHAM; 33(8); 1620-1629
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal Article
LANGUAGE: English
CROSSREF: CAEACT 144:27439
AB The complexes substituted with substituted phenylisoquinolines were synthesized for application in organic light-emitting diodes (OLEDs). Varying the substituents at the 2'- or 4'-positions of the isoquinoline ligand makes the color of the complexes tunable. The color of the substituted phenylisoquinoline-based iridium complexes (acetylacetone-bis[1-(4'-methoxyphenylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ia), (acetylacetone-bis[1-(4'-methoxyphenylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ib), (acetylacetone-bis[1-(4'-methoxyphenylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ic), and (acetylacetone-bis[1-(4'-methoxyphenylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ie) with respect to the 2'-substituted isoquinoline ligand (acetylacetone-bis[1-(4'-isopropenylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ia'), (acetylacetone-bis[1-(4'-trifluoromethylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ib'), (acetylacetone-bis[1-(4'-trifluoromethylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ic'), and (acetylacetone-bis[1-(4'-trifluoromethylisoquinolinate)-4'-phenyl]iridium(III) triphenylphosphine) (Ie'). All of these complexes are suitable for the red phosphorescent materials in OLEDs.
IT CAFUS
PL: CPS (Chemical process); DEV (Device component used); PFP (Physical, engineering or chemical process); PRO (Properties); PTF (Physical process); PREP (Synthetic preparation); PTO (Preparation); PTOC (Process); USES (Uses)
(preparation, structure, electrodes, photoluminescence and use of iridium compounds in organic light-emitting devices; phosphorescent materials; triplet emitters in OLEDs)
RN 870016-19-7 CAFUS
CN 855532-89-7 CAFUS
(C) INDEX NAME)



06 CITING REF COUNT: 20 THERE ARE 20 CAFUS RECORDS THAT CITE THIS RECORD (20 CITINGS)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD - ALL CITATIONS AVAILABLE IN THE RE FORMAT

1) NUMBER 12 OF 14 CAFUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2005123149 CAFUS Full-text
DOCUMENT NUMBER: 144145222
TITLE: Light-emitting devices employing organic host materials doped with phosphorescent dopants with optimized differences in electron affinity and ionization potential
INVENTOR(S): Iwasa, Kenji; Okada, Shinjiro; Takiguchi, Takeshi; Igawa, Satoshi; Hashimoto, Masaharu; Furukori, Mihoko; Hashimoto, Kenjiro; Kurokawa, Mihoko
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: U.S. Pat. Appl. Publ., 11 pp
COUNTRY: JPN/US
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050276984	A1	20051215	US 2005-131352	20050518
US 7293291	A2	20090302	US 2005-283239	20050929
JP 20060228823	A	20060202	JP 2005-283240	20050929
JP 4346203	B2	20070915	JP 2005-283239	20050929

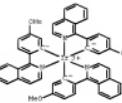
ASSIGNMENT HISTORY FOR THIS PATENT AVAILABLE IN THE RE FORMAT
AB The present invention provides a phosphorescent organic light-emitting device, and an organic light-emitting device sandwiched between an anode, and an organic light-emitting layer sandwiched between the anode and the cathode, in which the organic light-emitting layer is composed of a host material and one or more kinds of phosphorescent dopants, the phosphorescent dopants are host material and at least one kind of the dopants in 0.3 eV or less, and a difference in ionization potential between the host material and the at least one kind of the dopants is 0.3 eV or less.

17 8/5/2005-8/5/2007

PL: DEV (Device component used); MOA (Modifier or additive used); PFP

(Properties); USES (Uses)
(dopant; light-emitting devices employing organic host materials doped with phosphorescent dopants with optimized differences in electron affinity and ionization potential)

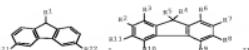
RN 855532-89-7 CAFUS
CN Iridium, tri[2-(1-isomquinolinyl- π)-5-methoxyphenyl- π]-, (OC-6-21) (CA INDEX NAME)



1) NUMBER 13 OF 14 CAFUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2005123101 CAFUS Full-text
DOCUMENT NUMBER: 143376454
TITLE: (3-Fluoronyl)carbazoles, and their organic light-emitting devices showing high luminescence efficiency and intensity
INVENTOR(S): Kanazawa, Atsushi; Okada, Shinjiro; Takiguchi, Takeshi; Igawa, Satoshi; Hashimoto, Masaharu; Kurokawa, Mihoko
PATENT ASSIGNEE(S): Canon Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp
COUNTRY: JPN
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

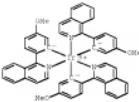
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 20042289114	A	20051120	JP 2004-100652	20040401
JP 20042289114	A	20051120	JP 2004-100652	20040401

GI



AB Little complex are I (31, 221, 922 = 4, halo, Cl-20 alkyl having OH2 substituted with O, S, P, etc.), (substituted) amino, silyl, aryl, heterocyclic, (substituted) aralkyl; R1 = substituents other than carbocyclic aromatic, heterocyclic, (substituted) aralkyl, (substituted) alkyl, (substituted) aryl, Cl-20 alkyl (having OH2 substituted with O, S, P, etc.), (substituted) amino, etc.) with their repeated structure. Thus, an organic electroluminescent device having a structure of Iridium-tri(2-(1-quinolyl)-4-5-methoxyphenyl)-phenophosphorescent Ir complex doped in a polymer (e.g., polyvinylidene component used); MDA (Modifier or additive used): USES (Chem) (phosphorescent dopant for emitter layer; Fluorophorescences for organic electroluminescent devices and the like)

22 655532-09-1 CAPLOG
23 Iridium-tri[2-(1-quinolyl)-4-5-methoxyphenyl-NC]-
(OC-6-221) (CA INDEX NAME)

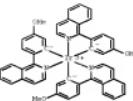


00.CITTING REF COUNT: 2 THERE ARE 2 CAPLOG RECORDS THAT CITE THIS RECORD
(2 CITIMES)

LT AUTHOR 14 OF 14 CAPLOG COPYRIGHT 2010 ACS ON ZINN
ACCESSION NUMBER: 2005356313 CAPLOG Full-text
DOCUMENT NUMBER: 143178282
TITLE: Substituent effects of iridium complexes for highly
efficient red OLEDs
AUTHOR(S): Okada, Shinjiro; Okinaka, Keiji; Iwatsuki, Hiromitsu;
Tsuruta, Toshiyuki; Yamada, Toshiaki; Kubota, Toshihiko;
Kanemoto, Junji; Igawa, Satoshi; Tanahashi, Akira;
Takiguchi, Takeshi; Hendo, Kenjiro;
Citation: Dalton Trans (2005), (9), 1583-1590
CORPORATE SOURCE: Dalton Transactions (2005), (9), 1583-1590
SOURCE: Cengage DMNAF; ISSN: 1477-9226
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LOCATED IN: CAPLOG
OTHER SOURCE(S): CASSIACIT 143178282
AB This study reports substituent effects of iridium complexes with 1-
phenylquinoline ligands. The emission spectra and phosphorescence quantum
yield of the complexes differ from that of tri(2-phenylquinolinate-

C2,N-Substituted-Cl11) (Iridia) depending on the substituents. The emission peak, quantum yield and lifetime of these complexes ranged from 530-635 nm, 0.17-0.32 and 1.07-2.34 μ s, resp. This indicates the nature of the substituents has a significant influence on the kinetics of the excited-state decay. The substituents also affect the long wavelength absorption ability of the HOMO. Furthermore, these substituents have effect on the oxidation to a mixture between 3N- π^* and 3MLCT for the lowest excited states. Some of the compounds show the largest quantum yield than Iridia, which has the same quantum yield of 0.22. The organic light emitting diode (OLED) device based on tri(1-(4-fluoro-5-methoxyphenyl)quinolinate-Cl11) iridium(III) complex gives the highest quantum yield of 0.32 and a power efficiency of 2.4 lm/W at a luminance of 230 cd/m². An activation energy of the device was close to an NTA specification with CIE chromaticity
 $\gamma = 0.34$, $\beta = 0.17$

LT LT: CPS (Chemical process); PRC (Physical, engineering or chemical process); PREP (Preparation); PRC (Process);
(Preparation) PRC (Process);
00.CITTING REF COUNT: 49 THERE ARE 49 CAPLOG RECORDS THAT CITE THIS RECORD
REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE ON THE RE FORMAT
22 655532-09-7 CAPLOG
23 Iridium-tri[2-(1-quinolyl)-4-5-methoxyphenyl-NC]-
(OC-6-221) (CA INDEX NAME)



00.CITTING REF COUNT: 49 THERE ARE 49 CAPLOG RECORDS THAT CITE THIS RECORD (49 CITIMES)
REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE ON THE RE FORMAT